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<110> F. Hoffmann-La Roche AG

<120> Expression system for preparing IL-15/Fc fusion proteins and its use

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<151> 2004-04-14

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gatcctttga	tcttttctac	ggggtctgac	gctcagtgga	acgaaaactc	acgtaaggg	6360
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ggtcctccga tcgttgcag aagtaagttg gccgcagtgt tatcactcat ggatatggca	6960
gcactgcata attctcttac tgtcatgcca tccgtaagat gctttctgt gactggtgag	7020
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cccaactcgtg cacccaaactg atcttcagca tctttactt tcaccagcgt ttctgggtga	7260
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ataactcatac tcttccttt tcaatattat tgaagcattt atcagggtta ttgtctcatg	7380
agcggataca tatttgaatg tatttagaaa aataaacaaa taggggttcc ggcacattt	7440
ccccgaaaag tgccacctga cgtc	7464

<210> 3

<211> 1113

<212> DNA

<213> Artificial sequence

<220>

<223> DNA for mutated IL-15/Fc with CD5 leader

<400> 3	
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caatctatgc atattgatgc tactttat acggaaagtg atgtcaccc cagttgcaaa	180
gtaacagcaa tgaagtgc ttctttggag ttacaagtta tttcacttga gtccggagat	240
gcaagtattc atgatacagt agaaaatctg atcatcctag caaacaacag tttgtcttct	300
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aaatctgctg acaaaaactca cacatgccc ccgtgccccag cacctgaact cctgggggaa	480
ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggaccct	540

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agcacgtacc	gtgtggtcag	cgtcctcacc	gtcctgcacc	aggactggct	aatggcaag	720
gagtacaagt	gcaaggcttc	caacaaagcc	ctcccagccc	ccatcgagaa	aaccatctcc	780
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ctgaccaaga	accaggtcag	cctgacctgc	ctggtaaaag	gcttctatcc	cagcgacatc	900
gccgtggagt	gggagagcaa	tggcagccg	gagaacaact	acaagaccac	gcctccgtg	960
ctggactccg	acggctcctt	cttcctctac	agcaagctca	ccgtggacaa	gagcaggtgg	1020
cagcagggga	acgtcttctc	atgctccgtg	atgcatgagg	ctctgcacaa	ccactacacg	1080
cagaagagcc	tctccctgtc	tccggtaaa	tga			1113

<210> 4

<211> 370

<212> PRT

<213> Artificial sequence

<220>

<223> Amino acid sequence of human CRB-15 with CD5 leader

<400> 4

Met	Pro	Met	Gly	Ser	Leu	Gln	Pro	Leu	Ala	Thr	Leu	Tyr	Leu	Leu	Gly
1						5				10				15	

Met	Leu	Val	Ala	Ser	Cys	Leu	Gly	Asn	Trp	Val	Asn	Val	Ile	Ser	Asp
						20			25				30		

Leu	Lys	Lys	Ile	Glu	Asp	Leu	Ile	Gln	Ser	Met	His	Ile	Asp	Ala	Thr
						35		40			45				

Leu	Tyr	Thr	Glu	Ser	Asp	Val	His	Pro	Ser	Cys	Lys	Val	Thr	Ala	Met
						50		55			60				

Lys	Cys	Phe	Leu	Leu	Glu	Leu	Gln	Val	Ile	Ser	Leu	Glu	Ser	Gly	Asp
						65		70			75			80	

Ala	Ser	Ile	His	Asp	Thr	Val	Glu	Asn	Leu	Ile	Ile	Leu	Ala	Asn	Asn
						85			90				95		

Ser Leu Ser Ser Asn Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys
100 105 110

Glu Glu Leu Glu Glu Lys Asn Ile Lys Glu Phe Leu Asp Ser Phe Val
115 120 125

His Ile Val Asp Met Phe Ile Asn Thr Ser Asp Pro Lys Ser Ala Asp
130 135 140

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
145 150 155 160

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
165 170 175

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
180 185 190

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
195 200 205

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
210 215 220

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
225 230 235 240

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
245 250 255

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
260 265 270

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
275 280 285

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
290 295 300

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
305 310 315 320

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
325 330 335

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His

340

345

350

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
355 360 365

Gly Lys
370

<210> 5

<211> 371

<212> PRT

<213> Artificial sequence

<220>

<223> Amino acid sequence of murine IL-15/Fc (human mutated IL-15,
murine IgG2A) with CD5 leader

<400> 5

Met Pro Met Gly Ser Leu Gln Pro Leu Ala Thr Leu Tyr Leu Leu Gly
1 5 10 15

Met Leu Val Ala Ser Cys Leu Gly Asn Trp Val Asn Val Ile Ser Asp
20 25 30

Leu Lys Lys Ile Glu Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr
35 40 45

Leu Tyr Thr Glu Ser Asp Val His Pro Ser Cys Lys Val Thr Ala Met
50 55 60

Lys Cys Phe Leu Leu Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp
65 70 75 80

Ala Ser Ile His Asp Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn
85 90 95

Ser Leu Ser Ser Asn Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys
100 105 110

Glu Glu Leu Glu Glu Lys Asn Ile Lys Glu Phe Leu Asp Ser Phe Val
115 120 125

His Ile Val Asp Met Phe Ile Asn Thr Ser Asp Pro Arg Gly Pro Thr

130 135 140

Ile Lys Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly
145 150 155 160

Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met
165 170 175

Ile Ser Leu Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu
180 185 190

Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val
195 200 205

His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu
210 215 220

Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly
225 230 235 240

Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile
245 250 255

Glu Arg Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val
260 265 270

Tyr Val Leu Pro Pro Pro Glu Glu Met Thr Lys Lys Gln Val Thr
275 280 285

Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu
290 295 300

Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro
305 310 315 320

Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val
325 330 335

Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val
340 345 350

His Glu Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr
355 360 365

Pro Gly Lys
370